TERENT'YEV, V.M.; STASENKO, N.N.

Disorders in the carbohydrate metabolism of barley plants caused by early lodging on peat soils [with summary in English]. Fiziol. rast. 5 no.3:259-263 My-Je '58. (MIRA 11:6)

1. Institut biologii AN BSSR, Minsk.
(Barley)
(Carbohydrate metabolism)
(Peat soils)

TERENT'YEV, V.M.

Characteristics of the convergence zone of the Aldan Shield and Dzhugdzhur fold region. Inform.sbor. VSEGEI no.22:71-81 '59. (MIRA 14:12)

(Aldan Platteau--Faults(Geology))
(Dzhugdzhur Range--Faults(Geology))

TERENT'YEV, V.M.; TSAREVA, R.I.; LOYKO, A.N.

Effect of soil conditions on the chemical composition of barley grain. Biul. Inst. biol. AN BSSR no.5:157-162 '60.
(MIRA 14:7)
(BARLEY) (PEAT SOILS) (GRAIN--ANALYSIS AND CHEMISTRY)

TERENT'YEV, V.M.; TSAREVA, R.I.; LOYKO, A.N.

Physiological relationships among individual shoots in the barley plant. Biul. Inst. biol. AN BSSR no.5:163-180 '60. (MIRA 14:7)

(BARLEY) (PLANTS, MOTION OF FLUIDS IN)

TERENT'YEV, V.M.; GOLOVNEVA, N.B.

Physiological role of iodine in plants. Biul. Inst. biol. AN BSSR no.6:130-134 '61. (MIRA 15:3)
(PLANTS, EFFECT OF IODINE ON)

TERENT'YEV, V.M.; STASENKO, N.N.; PETROVICH, Zh.I.

Duration of the assimilation of $C^{14}O_2$ and of the utilization of assimilates by aerial parts of barley in onthogenesis. Biul. Inst. biol. AN BSSR no.6:135-141 '61. (MIRA 15:3)
(PLANTS—ASSIMILATION)

TERENT'YEV, V.M.; TSAREVA, R.I.; LOYKO, A.N.

Physiological relations between barley shoots of different age.
Biul. Inst. biol. AN BSSR no.6:142-150 '61. (MIRA 15:3)
(PLANTS--ASSIMILATION)
(BARLEY)

TERENT'YEV, V.M.; TSAREVA, R.I.; LOYKO, A.N.

Effect of lateral shoots on the feeding of the main stem of the gramineae. Biul. Inst. biol. AN BSSR no.6:151-157 '61.
(MIRA 15:3)

(GRAMINEAE)
(PLANTS--NUTRITION)

TERENT'YEV, V.M.; TERENT'YEVA, M.V.

Microelements in water of the peat soil. Biul. Inst. biol. AN BSSR no.6:158-160 '61. (MIRA 15:3)
(TRACE ELEMENTS)
(PEAT SOILS)

TERENT'YEV, V.M.; [illegible], V.D.

Effect of the moisture in peat soil on the assimilation of carbon dioxide by corn plants. Dokl. AN BSSR 5 no.9:401-404 S '61. (MIRA 14:10)

1. Institut biologii AN BSSR.
(Peat soils)
(Corn(Maize))

TERENT'YEV, V.M.; KONOVALOVA, L.N.

Effect of the moisture regime of peat soils on the formation of substances composing the mechanical tissues of plants. Dokl. AN BSSR 5 no.11:511-514 N '61. (MIRA 15:1)

1. Predstavleno akademikom AN BSSR T.N.Godnevym.
(Plants--Water requirements) (Lignin) (Cellulose)

GODNEV, T.N., otv. red.; VECHER, A.S., red.; TERENT'YEV, V.M., red.; GONCHARIK, N.M., red.; MASHTAKOV, S.M., red.; BULANOV, P.A., red.; ZAYTSEVA, T., red. izd-va; SIDERKO, P., tekhn. red.

[Physiology and biochemistry of plants]Fiziologiia i biokhimiia rastenii. Minsk, Izd-vo Akad. nauk BSSR, 1962. 127 p. (MIRA 15:9)

1. Akademiya navuk BSSR, Minsk. Instytut biialogii.
(Plant physiology)

GONCHARIK, Mikhail Nikolayevich; TERENT'YEV, V.M., doktor biol. nauk, red.; KHOLYAVSKIY, S., red. izd-va; VOLOKHONOVICH, I., tekhn. red.

[Effect of ecological conditions on the physiology of cultivated plants] Vliianie ekologicheskikh uslovii na fiziologiiu kul'turnykh rastenii. Minsk, Izd-vo Akad. nauk BSSR, 1962. 246 p. (MIRA 16:5)

(Russia, Northern—Plants, Cultivated)
(Plant physiology)

TERENT'YEV, V.M. [TSiarents'eu, V.M.]; MINCHENKOVA, M.D. [Minchankava, M.D.]

Effect of various amounts of copper on the dynamics of carbohydrates in barley. Vestsi AN BSSR. Ser. biial. nav. no.4:26-32 '62. (MIRA 17:8)

BULANOV, P.A., red.; VECHER, A.S., red.; GODNEV, T.N., red.; GONCHARIK, N.M., red.; LYAKHNOVICH, Ya.P., red.; MASHTAKOV, S.M., red.; MIRONENKO, A.V., red.; TEREN'TYEV, V.M., red.

[Physiological characteristics of cultivated plants] Fiziologicheskie osobennosti kul'tiviruemykh rastenii. Minsk, Izd-vo "Nauka i tekhnika," 1964. 130 p. (MIRA 17:6)

1. Akademiya navuk BSSR, Minsk. Institut eksperimental'noy botaniki i mikrobiologii.

TERENT'YEV, V.N. [Terent'ev, V.N.] [illegible]

Summing up the scientific work of academicians and members-correspondents of the Department of Biological Sciences of the Academy of Sciences of the White Russian S.S.R. in 1963. Vestsi AN BSSR. Ser. biial. nav. no.2:121-130 '64. (MIRA 17:11)

1. Zamestitel' akademika-sekretarya Otdeleniya biologicheskikh nauk AN BSSR (for Terent'yev). 2. Uchenyy sekretar' Otdeleniya biologicheskikh nauk AN BSSR (for Kupchinov).

L 5248-66 EWT(1)/EWA(j)/EWA(b)-2 JK

ACC NR: AP5025973 SOURCE CODE: UR/0250/65/009/008/0544/0546

AUTHOR: Tsareva, R.I.; Terent'yev, V.M.

ORG: Institute of Experimental Botany and Microbiology, AN BSSR (Institut Ekeperimental'noy Botaniki i Mikrobiologii AN BSSSR)

TITLE: Some physiologically active substances of peat soil

SOURCE: AN BSSR. Doklady, v. 9, no. 8, 1965, 544-546

TOPIC TAGS: plant growth, soil chemistry, gibberellin

ABSTRACT: In 1963, the authors carried out a series of studies in order to determine the presence of gibberellin like substances in peat soil. The acidified samples were extracted with ethyl acetate, and the extracts separated by paper chromatography (identification by fluorescence in UV light). The chromatograms obtained showed two zones located at the level of gibberellins which, like the latter, fluoresced with a blue color in UV light. The physiological activity of these substances was checked on the "Pioner" dwarf pea. Plants grown on chromatogram sections which contained the extracts showed a growth that was 19 to 25% greater than that of the controls. Thus, the solution saturated with pe..t soil in April-May contains substances which behave like gibberellins in fluorescence and growth stimulation; however, a closer identification of these substances requires additional studies. The paper was presented by Academician T.N. Godnev of the AN BSSR. Orig. art. has: 1 figure and 1 table.

Card 1/2

L 5248-66

ACC NR: AP5025973

SUB CODE: LS / SUBM DATE: 01Dec64 / ORIG REF: 005 / OTH REF: 006

Card 2/2

TERENT'YEV, V.M. [Tsiarents'eu, V.M.], doktor biolog. nauk; KUPCHINOV, N.N. [Kupchynau, M.M.], kand. sel'skokhoz. nauk

Results of the scientific activity of academicians and member correspondents of the Department of Biology of the Academy of Sciences of the White Russian S.S.R. Vestsi AN BSSR. Ser. biial. nav. no.2:128-138 '65. (MIRA 18:12)

1. Zamestitel' akademika-sekretarya Otdeleniya biologicheskikh nauk AN BSSR (for Terent'yev). 2. Nauchnyy sekretar' Otdeleniya biologicheskikh nauk AN BSSR (for Kupchinov).

TSAREVA, R.I. [TSarova, R.I.]; TERENT'YEV, V.M. [TSiarents'eu, V.M.]; SHCHUTSKAYA, O.V.

Quantitative content of low-molecular organic acids in peat and mineral soils. Vestsi AN BSSR. Ser. biial. nav. no.3: 62-66 '65. (MIRA 18:11)

YEMEL'YANOV, L.G. [Emel'ianau, L.R.]; TERENT'YEV, V.M. [TSiarents'eu, V.M.]

Effect of changing soil moisture on the concentration of cell sap, water content and productivity of tomato plants. Vestsi AN BSSR. Ser. biol. nav. no.2:56-59 '65. (MIRA 18:12)

TERENT'YEV, V.N. (Khar'kov); FILIPPOV, A.P. (Khar'kov)

Forced steady-state vibrations of infinite beams supported by an elastic semispace. Prik. mekh. 1 no.9:107-114 '65.
(MIRA 18:10)

1. Khar'kovskiy filial Instituta mekhaniki AN UkrSSR.

GRUDEV, P.I.; TERENT'YEV, V.S., kand. tekhn. nauk; KOROLEV, A.A., prof.

Book reviews. Stal' 25 no.12:1116-1119 D '65.
(MIRA 18:12)

1. Nauchno-issledovatel'skiy institut tyazhelogo mashinostroyeniya Ural'skogo mashinostroitel'nogo zavoda (for Terent'yev). 2. Moskovskiy vecherniy metallurgicheskiy institut (for Korolev).

6 (7) SOV/111-59-4-9/25

AUTHORS: Drugov, V. M., Candidate of Technical Sciences, Senior Research Assistant NIITS; Terent'yev, V. N., Engineer, Junior Research Assistant

TITLE: A Transistorized Two-Way Telephone Amplifier (Dvustoronniy telefonnyy usilitel'na poluprovodnikovykh triodakh)

PERIODICAL: Vestnik svyazi, 1959, Nr 4, pp 9 - 10 (USSR)

ABSTRACT: A new transistorized two-way telephone amplifier was developed at NIITS. It is to be used for cable lines of city and suburban telephone networks. About 20 amplifiers may be mounted in one bay (305 x 105 x 2365 mm) and a control panel permits the checking of the function of each of them. The circuit diagram is shown by Figure 1. The amplifier is a lattice four-pole or a so-called bridge amplifier consisting of two parts. The first part, the series section of the bridge circuit contains a line transformer, one converter and a two-terminal network. The transformer has two identical line coils and is built symmetrical in regard to ground. The second part of the amplifier, the paralliel

Card 1/2

A Transistorized Two-Way Telephone Amplifier

section, contains a converter and a two-terminal network. The converters contain two transistors each; types P1V, P6V or P14 may be used. The maximum amplification is obtained when the device works as a terminal unit; at 800 cycles it is 1 neper. The frequency range of the amplifier is 300 to 3400 cycles. The application of the bridge amplifier permits a higher line attenuation: for city lines to long distance stations, up to 1 neper; for inter-station communication lines 1 to 3 nepers (depending upon the number of amplifiers); subscriber lines - 1 to 2 nepers (depending upon the number of amplifiers). The power consumption is around 30 watts at 60 volts (24 or 48 volts may be used). These amplifiers have been tested in Leningrad at the Volodarskaya ATS since July 1957, and at the long-distance telephone exchange since April 1958. The effectiveness of this type of amplifier is demonstrated by Figure 3. A small number of these amplifiers will be produced by the experimental workshops of NIITS. There are 2 diagrams and 1 graph.

GRUSEVICH, S.I.; SHAPIRO, S.B.; YEFRETOVA, Ye.I.; BESKIND, A.A.; FARAFONOV, L.S.; TERENT'YEV, V.N.; VASIL'YEVA, L.S.; FARAFONOV, L.S., otv. red.; ULANOVSKAYA, N.M., red.; ROMANOVA, S.F., tekhn. red.

[New equipment and operating techniques of automatic telephone exchanges] Novaia tekhnika i metody ekspluatatsii ATS; informatsionnyi sbornik. Moskva, Sviaz'izdat, 1963. 151 p. (MIRA 16:12)

(Telephone)

SHCHEGLOVSKIY, G.V. [Shchehlos'kyi, H.V.], inzh.; TERENT'YEV, V.O. [Terent'iev, V.O.], inzh.

New machinery for livestock farms. Mekh.sil'.khosp. 9 no.12: 26-27 D '58. (MIRA 12:1)
(Agricultural machinery) (Stock and stockbreeding)

L 27186-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(k) IJP(c) EM

ACC NR: AP6016881 SOURCE CODE: UR/0198/65/001/009/0107/0114

AUTHOR: Terent'yev, V. N. (Khar'kov); Filippov, A. P. (Khar'kov)

ORG: Khar'kov Branch, Institute of Mechanics, AN UkrSSR (Khar'kovskiy filial Instituta mekhaniki AN UkrSSR)

TITLE: Forced sustained oscillations of infinite beams lying on an elastic half-plane

SOURCE: Prikladnaya mekhanika, v. 1, no. 9, 1965, 107-114

TOPIC TAGS: fabricated structural metal, mechanical engineering

ABSTRACT: The authors solve the three-dimensional problem of the motion of a force along an infinite beam lying on an elastic half-space for the case of forced sustained oscillations. It is assumed that masses move along the beam with a constant velocity v, and that the moving and spring-supported masses are subject to periodic forces with frequency p. The special case of motion of a constant force was studied previously (Filippov, A.P., Izv. AN SSSR, Seriya "Mekhanika i mashinostroyeniye", OTN, No 6, 1961). Orig. art. has: 1 figure and 20 formulas. [JPRS]

SUB CODE: 20 / SUBM DATE: 09Apr65 / ORIG REF: 003 / OTH REF: 004

Card 1/1

RIVLIN, L.B., inzh.; TERENT'YEV, V.P., inzh.

Experience in adjusting the parallel operation of generators with mixed excitation. Energetik 10 no.3:22-23 Mr '62. (MIRA 15:3)
(Electric power distribution)
(Electric generators)

S/2892/63/000/002/0006/0023

ACCESSION NR: AT4021246

AUTHOR: Kimel', L. R., Panchenko, A. M., Terent'yev, V. P.

TITLE: Calculation of the spectral angular distribution of scattered radiation of a point unidirectional cesium 137 source in iron by means of the Monte-Carlo method

SOURCE: Voprosy* dozimetrii i zashchity* ot izluchenіy, no. 2, 1963, 6-23

TOPIC TAGS: Monte-Carlo method, computers, Strela-3, energy scattering, spectral distribution, angular distribution, point source, unidirectional source, γ quantum, Compton effect, photoeffect, energy albedo, iron

ABSTRACT: In the article by Berger, M. J., Spenser, L. V. (radiation RES., vol. 10, no. 5, page 552 (1959)) the problem on the distribution of scattered energy of a unidirectional point source with an initial γ quantum energy of 1.2 MeV in a semi-infinite water medium was solved by a combination of the analytic method and the Monte-Carlo method. The authors have undertaken the task of presenting the spectral angular distribution of this type of source. The calculations of this article are based on the Monte-Carlo method and were done on the electronic computer Strela-3 of VTsAN SSSR. The results were obtained on the analysis of 5420 γ quantum histories. The unidirectional point source with an initial γ quanta energy of

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MACHINE ENGINEERING - PHYSICS INST.

ACCESSION NR: AT4021246

E_{0_3} = 0.661 MeV is located in an infinite iron medium with a density of ρ = 7.89 g/cm^3. The sequence of the calculation is as follows: 1) the track of the γ quanta is found; 2) the type of interaction is determined; 3) the angle of the quantum scattering in the Compton process is set; 4) the quantum energy after scattering is determined; and 5) the azimuthal angle of scattering is found, disregarding the polarization of the γ quanta. The spectral angular distribution and function of the attenuation of the scattered radiation is obtained. Some data, known from literature, is also calculated for the purpose of verifying the method. These are correlated in different graphs. The energy albedo is determined as a relationship of the amount of energy reflected from the semi-infinite medium to the energy falling on this medium for an identical length of time. The angular distribution of scattered energy for the central areas is constructed from the graphs. A shift of the spectra in a low energy region is noted with the increase of the angle. Radial distribution of the scattered energy corresponding with experimental data done by Gol'dshteyn (Osnovy* zashchity* reaktorov. M., Gosatomizdat, 1961) are obtained. The numerical and energy albedo and the attenuation of the primary beam are also calculated. The authors express their thanks to O. I. Leypunskiy for his constant attention to the article and to V. N. Seleznev for aid given in the programming of the problem. Orig. art. has: 16 formulas, 12 figures, and 2 tables.

Card 2/3

KIMEL', L.R.; PANCHENKI, A.M.; POLYAKOV, V.I.; TERENT'YEV, V.P.

Experimental study of the distribution function of monodirectional point sources of γ-quanta with initial energies of 0.661 and 1.25 Mev. in concrete, aluminum, iron, and lead. Vop. doz. i zashch. ot izluch. no.2:28-39 '63. (MIRA 17:3)

KIMEL', L.R.; PANCHENKO, A.M.; TERENT'YEV, V.P.

Calculation of the spectral-angular distribution of scattered gamma quanta from a Cs^{137} monodirectional point source in iron. Atom. energ. 15 no.4:328-331 O '63. (MIRA 16:10)

TERENT'YEV, Vasiliy Stepanovich; TSALYUK, Matus Borisovich; BENYAKOVSKIY, M.A., retsenzent; PONOMAREV, V.A., red.; FARSHAYT, Ye.D., red.; SKOROBOGACHEVA, A.P., red. izd-va; TURKINA, Ye.D., tekhn. red.

[Thin sheet finishing mills] Ad"iustazh tonkolistovykh stanov; otdelochnye mashiny. Sverdlovsk, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 344 p. (MIRA 15:2)
(Rolling mills--Equipment and supplies)

TRET'YAKOV, A.V., kand.tekhn.nauk; TERENT'YeV, V.S., inzh.; POZINA, R.A., inzh.

Design of rolling mill reelers and auxiliary units. Vest.mashinostr. 44 no.1:15-16 Ja '64. (MIRA 17:4)

TERENT'YEV, V.S., kand.tekhn.nauk

Cold rolling mill for the Helwan metallurgical plant. Sbor. st. NIITIAZHMASHa Uralmashzavoda no.6:118-127 '65.
(MIRA 18:11)

TERENT'YEV, V.S., kand.tekhn.nauk; TSALYUK, M.B., inzh.

New high-speed unit for cross cutting. Sbor. st. NIITIAZHMASHa Uralmashzavoda no.6:128-139 '65.

(MIRA 18:11)

TERENT'YEV, V.S., kand.tekhn.nauk; AVERBUKH, L.D., inzh.; TRET'YAKOV, A.V., kand.tekhn.nauk

Using hydropneumatic servo systems for strip centering along a machine unit axis. Sbor. st. NIITTAZHMASHa Uralmashzavoda no.6:140-145 '65. (MIRA 18:11)

TRET'YAKOV, A.V., kand. tekhn. nauk; TERENT'YEV, V.S., kand. tekhn. nauk; KOBELEV, V.A., inzh.; POZINA, R.A., inzh.

Investigating strip tension of finishing machine coilers. Sbor. st. NIITIAZHMASHa Uralmashzavoda no.6:260-274 '65. (MIRA 18:11)

TERENT'YEV, V. V.

Dies (Metalworking)

Die with electric heating unit. Stan. i instr., No. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1953, Uncl.

TERENT'YEV, V. V., FLEROV, G. V., KLOCHKOV, D. S., and SKOBKIN, V. S.

(Acad. Sci. USSR)

"On the Stability of Proton,"

paper submitted at the A-U Conf. on Nuclear Reactions in Medium and Low Energy Physics, Moscow, 19-27 Nov 57

TERENT'YEV, V.V.

AUTHORS: Flërov, G. N., Corresponding Member AN USSR, 20-1-19/58
Klochkov, D. S., Skobkin, V. S., Terent'yev, V. V.

TITLE: The Spontaneous Fission of Th^{232} and the Stability of Nucleons (Spontannoye deleniye Th^{232} i stabil'nost' nuklonov)

PERIODICAL: Doklady AN SSSR, 1958, Vol. 118, Nr 1, pp. 69-71 (USSR)

ABSTRACT: First the authors shortly report on respective earlier works. Many a thing spoke in favor of the determination of the half-life period of the spontaneous fission of Th^{232} by means of an essential increase of the sensitiveness of the method. Such an increase of the sensitiveness can be reached by an increase of the total quantity of experimental material as well as by a decrease of the background. The advantages of proportional counters are mentioned. The counters used here were produced of thin aluminum tubes. Thorium was deposited in form of ThO_2 with bakelite lacquer on inner surface of the semi-cylindrical grooves in the cathode of the counter. As anode served Nichronium wires with a diameter of 50 μ. The counters were filled with methane and had a wide proportionality range. For the increase of the total quantity of the experimental material some counters of the same type were used. Special attention was paid to the decrease of the

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background. Possible reasons for errors e. g. neutrons, are pointed out. From the measurements discussed here the following results: the half-life period of Th^{232} is (if thorium suffers a spontaneous fission at all) more than 10^{21} years. If we accept the condition that thorium nuclei, because of the decay of a nucleon, are divided into lighter particles the life of the compound nucleon is more than 10^{23} years. By means of the here discussed method for the registration of rare fission acts the authors also searched for transuranium elements in monazite minerals. For this purpose monazites from different deposits of an age of more than 10^9 years were investigated. For the plutonium content a value of $< 10^{-10}$% was obtained. There are 5 references, 1 of which is Slavic.

SUBMITTED: October 4, 1957

AVAILABLE: Library of Congress

L 18304-65 EWT(d)/EED-2/EWP(1) Po-4/Pq-4/Pg-4/Pk-4 IJP(c)/AFETR/AFMD(p)/ ASD(a)-5/AFTC(b)/AEDC(a)/AFTC(p)/ESD/ESD(dp)/RAEM(1) GG/BB

ACCESSION NR: AP4049059 S/0193/64/000/011/0050/0051

AUTHOR: Terent'yev, V. [illegible]

TOPIC TAGS: printing [illegible]

ABSTRACT: The [illegible] printer TBPM [illegible]

[illegible] the printing electromagnets. The lines are printed parallel and in series, each line printed during one revolution of the character wheels at a rate of 1200 lines/min. Although the line length is determined by the number of character wheels, the present line length is 16 characters. The TBPM 16/1200 is driven by a three-phase nonsynchronous motor (1390 r.p.m.) from a 50-cycle 220/380 volt

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L 18304-65
ACCESSION NR: AP4049059

a. c. power supply. It can operate for 23 hours out of 24 with 15-min periods of continuous printing and 5-min intervals for paper and printing ribbon change (1 hour for inspection.) Two models, one for transistorized and one for tube-controlled operation, are manufactured. The printer has the following additional characteristics: distance between lines 5.5 ± 0.5 mm, characters 2.7 x 1.8 mm, printing paper width 90 mm, ribbon 34 mm, unit weight 39 kg, dimensions 480 x 525 x 475 mm. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00

SUB CODE: DP NO REF SOV: 000 OTHER: 000

Card 2/2

TEPENT'YEV, V.Ya., inzh.

Through-type glued beams. Sbor. nauch. trudov LISI no.34:156-162 '61. (MIRA 15:3)
(Beams and girders) (Gluing)

TERENT'YEV, V.Ya., inzh.

Utilizing short pieces of lumber and waste wood in parts of bearing elements. Sbor. nauch. trudov LISI no.34:163-170 '61.
(MIRA 15:8)

(Gluing) (Wood waste)

TERENT'YEV, V.Ya., inzh.

Effect of moisture on the characteristics of particle board. Der. prom. 14 no.1:5-7 Ja '65. (MIRA 18:4)

1. Leningradskiy inzhenerno-stroitel'nyy institut.

ACC NR: AP7002721 SOURCE CODE: UR/0237/66/000/012/0013/0016

AUTHOR: Adrianova, I. I. (Candidate of sciences); Popov, Yu. V. (Candidate of sciences); Terent'yev, V. Ye. (Candidate of sciences)

ORG: none

TITLE: The regular generation of a ruby laser switched by a standing-wave diffraction modulator

SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 12, 1966, 13-16

TOPIC TAGS: ruby laser, Q switching, diffraction modulator, xylol, carbon tetrachloride, ultrasonic modulation

ABSTRACT: This article is a continuation of an earlier study (Optika i spektroskopiya, 20, 1966, 924) on the modulation of a laser beam by an ultrasonic wave in a diffraction modulator. The present experiments were carried out using modulated standing-wave and non-modulated traveling-wave diffraction modulators at above-threshold pumping energies controlled by the ultrasonic waves. The experimental ruby laser (12 mm long and 1.4 mm in diameter) was pumped by two flashlamps in a double elliptic reflector. The external cavity consisted of two dielectric mirrors 80 and 99.5% reflective at 0.7 μ. The diffraction modulator was placed between the ruby rod and the 99.5%-reflective mirror so that the ultrasonic waves were propagated through its

Card 1/2 UDC: 621.378.32:621.376

ACC NR: AP7002721

acoustic medium (xylol or carbon tetrachloride) in the direction parallel to the optical axis of the crystal. The laser beam was focused on a vacuum calorimeter with which the output energy was measured with an accuracy of up to 10%. A detailed analysis was made of the temporal, energy, and spatial characteristics of the laser output at various ultrasound intensities within the (1—2.3)P interval, where P = 2.6 kj is the value of the threshold pumping energy in the absence of ultrasound in the diffraction modulator. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 19Jan66/ ORIG REF: 002/ OTH REF: 001/ ATD PRESS: 5112

Card 2/2

L 27376-66 FED/EWT(1)/EWT(m)/EEC(k)-2/T/EWP(k)/EWA(h) IJP(c) WG/WH

ACC NR: AP6015444 SOURCE CODE: UR/0051/66/020/005/0924/0926

AUTHOR: Airiancva, I. I.; Popov, Yu. V.; Terent'yev, V. Ye.

ORG. none

TITLE: An experimental study of control of generation of a ruby laser by means of a modulated traveling ultrasonic wave diffraction modulator

SOURCE: Optika i spektroskopiya, v. 20, no. 5, 1966, 924-926

TOPIC TAGS: laser, solid state laser, ruby, coherent light, modulation, light modulation

ABSTRACT: The possibility of modulating a laser beam by an ultrasonic wave in a diffraction modulator placed between the ruby rod and the external mirror of an interferometer is experimentally investigated. In such an arrangement, modulation would be achieved by modulating the ultrasonic wave so that as a result of diffraction the laser beam would be periodically deflected from the direction normal to the mirror. The output power of the laser was 0.13 j. The presence of the xylene-filled modulator (in the absence of the ultrasonic wave) did not change the oscillation threshold or the power output of the laser. The modulating frequency of the ultrasound was 20—200 kcps and its intensity was such that the intensity of light in the zero-order maximum was 35, 25, and 5% of the maximum in the absence of ultrasound. In the absence of the ultrasonic waves the laser pulse exhibited irregular amplitude

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L 27[illegible]-66

ACC NR: AP6015444

and repetition rate. Generation controlled by ultrasonic waves was characterized by a higher density of relaxation packets with respect to the repetition period and the amplitude. At a constant modulation frequency the number of relaxations per packet and the duration of the packet decreased and the amplitude of the relaxations increased with increasing intensity of ultrasound. At a constant intensity of ultrasonic waves the number of relaxations per packet and their duration decreased with increasing modulation frequency until at some high frequency some of the packets were not generated. At a constant modulation frequency of the ultrasonic wave the energy of the modulated light decreases with increasing intensity of the ultrasound by 10—50%. Similar results were obtained using a 1-j laser. Orig. art. has: 2 figures.

[CS]

SUB CODE: 20/ SUBM DATE: 18Feb65/ ORIG REF: 002/ ATD PRESS: 4259

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L 64005-65 EWA(k)/EWD/EWT(l)/EWP(e)/EWI(m)/EWC(k)-2/EWI(i)/T/EEC(b)-2/EWP(k)/EWA(h)/

ACCESSION NR: AP5017773 UR/0051/65/019/002/0307/0310
621.378.325+534.321.9

AUTHOR: Adrianova, I. I.; Fedorov, Yu. V.; Terent'yev, V. Ye.

TITLE: Generation of giant pulses in a ruby laser by means of a traveling ultrasound wave diffraction modulator

SOURCE: Optika i spektroskopiya, v. 19, no. 2, 1965, 307-310

TOPIC TAGS: ruby laser, pulsed laser, giant pulse, pulse switching, pulse modulation, diffraction modulator, traveling wave modulator, passive switching, xylene

ABSTRACT: A light diffraction modulator, described previously by I. I. Adrianova (Optika i spektroskopiya, 12, 99, 1963), was used as an optical switch for enhancing the power output of a ruby laser. The switch was [illegible] diffraction by [illegible] ultrasound, the [illegible] interference of the laser action. At the instant the ultrasound excitation was discontinued, the switch opened to restore the laser action. A block diagram of the experimental setup is shown in

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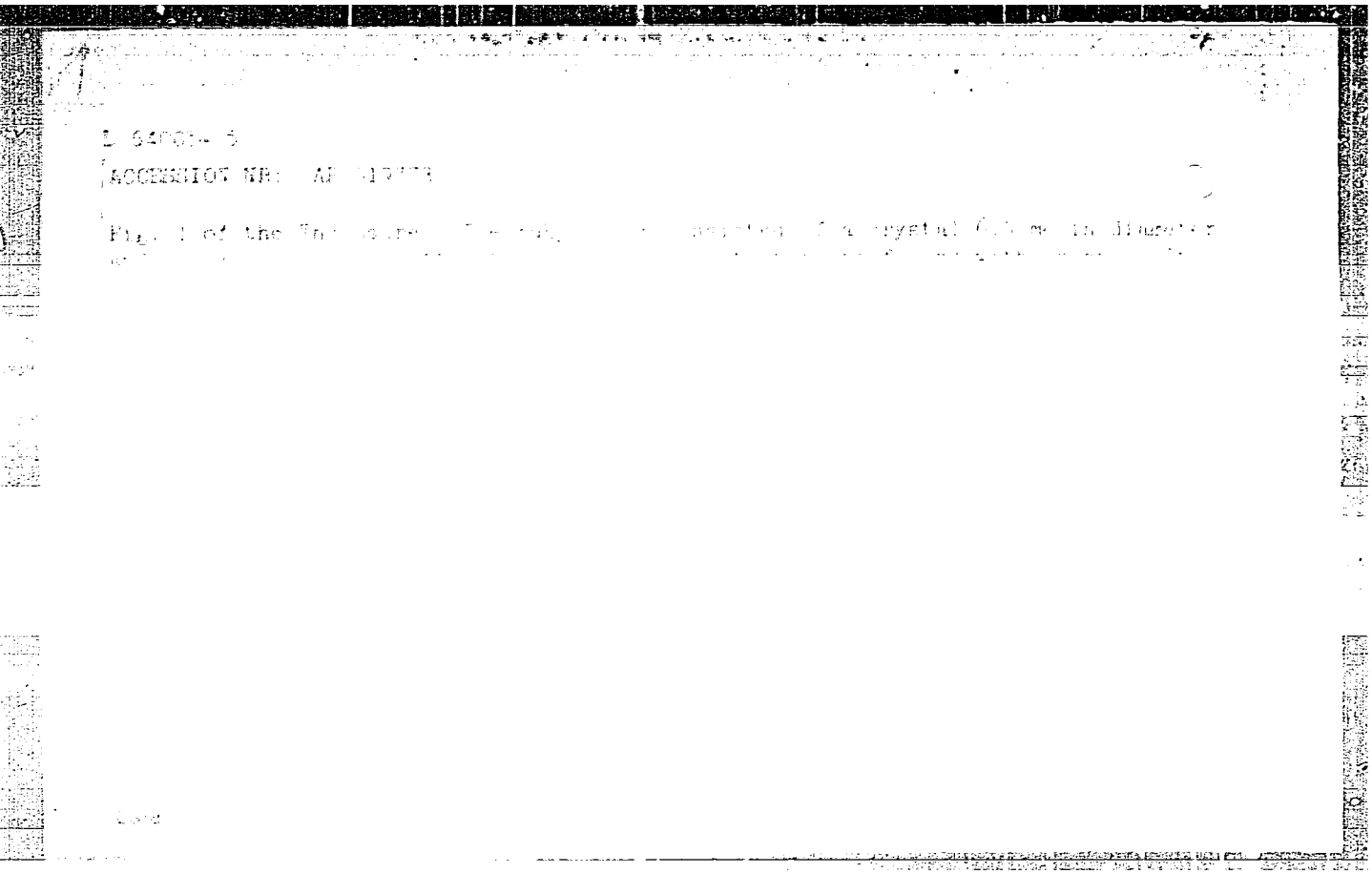

L 54005-65

... h-f oscillator ... pumping lamp supply; ... rod-type pumping lamp with reflector; ...

... mirror; 14 - vacuum calorimeter; 15 - microammeter; 16 - cathode voltmeter; a - radiator; b - absorber.

Card 3/3

ADRIANOVA, I.I.; POPOV, Yu.V.; TERENT'YEV, V.Ye.

Production of a powerful radiation pulse from a ruby laser with the aid of an ultrasonic traveling-wave diffraction modulator. Opt. i spektr. 19 no.2:307-310 Ag '65. (MIRA 18:8)

TERENT'YEV, Ya.

Small condensate diverter. Mias.ind.S.S.S.R. 33 no.6:43 '62
(MIRA 16:)

1. TSentral'noye byuro tekhnicheskoy informatsii Leningradskogo soveta narodnogo khozyaystva.
(Boilers)

TERENT'YEV, Ya.K.; KRIVOZUB, D.S.

Fuel cells. Prom.energ. 15(4):47-49 Ap '60. (MIRA 13:6)

(Fuel cells)

TERENT'Y[illegible] Ya.K., inzh.

[illegible]tallographite materials for the manufacture of bearings, packing, and piston rings. Energomashinostroenie 7 no.12:45-46 D '61. (MIRA 14:12)

(Graphite)

KOLESNIK, Nikolay Vasil'yevich, inzh.; TERENT'YEV, Yakov Kirillovich, inzh.; VASIL'YEV, I.A., red.izd-va; BELOGUROVA, I.A., tekhn. red.

[Vibratory cleaning, tumbling, grinding and polishing of machine parts] Vibratsionnaia ochistka, galtovka, shlifovanie i polirovanie detalei mashin; stenogramma lektsii. Leningrad, 1963. 47 p. (MIRA 16:6)
(Vibrators) (Metals--Finishing)

S/193/63/000/002/007/007
A004/A101

AUTHOR: Terent'yev, Ya. K.

TITLE: Using molybdenum sulfide for improving the durability of dies and cutting tools

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 2, 1963, 86 - 87

TEXT: The author presents a general survey on the chemical, mechanical and antifriction properties of MoS_2 and points out that it is widely used abroad as lubricant. The friction coefficient of a MoS_2 film amounts to 0.05 - 0.09, i.e. it is considerably lower than that of white. A chemical reaction with the atmospheric oxygen takes place only at temperatures over 693°K, while in the absence of air, it resists temperatures of up to 1,273°K. MoS_2 increases the service life of cutting tools by 200 - 300% even under unfavorable material conditions, e.g. transformer iron containing a high amount of silicon. It is reported that a new method of producing synthetic molybdenum sulfide of laminar structure has been developed at Łódź (Polish People's Republic). According to this method, pure ammonium molybdate is melted at 633 - 653°K with the double amount (in weight) of

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Using molybdenum sulfide for...

amorphous or crystalline sulfur. The gray-black powder obtained has a hexagonal structure and good lubricating properties. The author describes some modes of applying MoS_2 to cutting tools and dies, and states that drills, reamers, high-speed steel cutting tools, blanking and drawing dies are coated with MoS_2 at the plants of the GDR. He points out that MoS_2 can also be used for lubricating anti-friction bearings and quotes in this connection the following bibliographic references: Fertigungstechnik und Betrieb, 1961, No. 11, 745; Maschinenbau, 1961, No. 9, 390.

Card 2/2

TERENT'YEV, Ya.K.

Vibration cleaning of metal parts. Biul.tekh.-ekon.inform.Gos. nauch.-issl.inst.nauch. i tekh.inform. no.3:90-95 '63. (MIRA 16:4)

(Machine-shop practice)

TERENT'YEV, Ya.K.

Thermodynamic condensate outlet. Mashinostroitel' no.5:23 My '63. (MIRA 16:7)

(Boilers)

TEREN'T'YEV, Ya.K.

Metallographic materials for bearings, and piston and gasket rings (from "Machine Shop Magazine," no.3 1961). Prom.energ. 18 no.2:43 F '63. (MIRA 16:2)

(Alloys)

ACCESSION NR: AP4014372 S/0193/64/000/002/0076/0077

AUTHOR: Terent'yev, Ya. K.

TITLE: Technical-economic advisory board of the Leningrad council of national economy

SOURCE: Byul. tekhn.-ekon. inform., no. 2, 1964, 76-77

TOPIC TAGS: molybdenum disulfide, antifriction coating, increased wear resistance, cutting tool, friction coefficient, MoS_2 synthetic production method

ABSTRACT: Molybdenum disulfide, an antifriction coating produced by a new synthetic method, is reported to increase wear resistance of cutting tools by 2-3 times. This coating may be applied in the form of a marker or water suspension into which metal parts are dipped. Before coating, oxide or grease films are removed to ensure good adhesion. After coating, the metal parts are dried at 100°C. The friction coefficient of the MoS_2 coating ranges from .03 to .09. During MoS_2 preparation, the particles must be finely ground to ensure good dispersity. On the basis of experimental research nearing

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ACCESSION NR: AP4014372

completion, the use of MoS_2 is strongly recommended in machine building and finishing plants. Orig. art. has: None.

ASSOCIATION: None

SUBMITTED: 00 DATE ACQ: 02Mar64 ENCL: 00

SUB CODE: ML NO REF SOV: 000 OTHER: 000

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#606

Tensina, I. I.

to

Terent'yev, Ya. K.